UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,432	10/01/2003	Ananth Madhavan	2566-210	5660

6449 7590 02/25/2008

ROTHWELL, FIGG, ERNST & MANBECK, P.C.
1425 K STREET, N.W.
SUITE 800
WASHINGTON, DC 20005

EXAMINER	
AKINTOLA, OLABODE	
ART UNIT	PAPER NUMBER
3691	

NOTIFICATION DATE	DELIVERY MODE
02/25/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-PAT-Email@rfem.com

Office Action Summary	Application No.	Applicant(s)	
	10/674,432	MADHAVAN ET AL.	
	Examiner	Art Unit	
	OLABODE AKINTOLA	3691	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 January 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-54* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-54* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 6-8, 12-13, 40 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noser et al (USPAP 20030225660) ("Noser") in view of Keim et al ("The Cost of Institutional Equity Trades", Financial Analyst Journal, 1998) ("Keim").

Re claims 1, 6-8, 13, 40 and 52: Noser teaches a method for creating a database, said method comprising: collecting security transaction data for a pre-selected period of time (section 0007), for a plurality of investment investors (section 0007), said transaction data including identity of

securities being traded, transaction order sizes, execution prices and execution times (sections 0085-0086).

Noser does not explicitly teach grouping said transaction data into groups of orders, wherein each group of orders consists of a plurality of orders each associated with a common category from a plurality of common categories; calculating a plurality of cost benchmarks for each group of orders; estimating transaction costs for each institutional investor from said transaction data relative to each of said calculated cost benchmarks for each category of said plurality of common categories; and storing said data for said calculated benchmarks and said estimated transaction costs (claim 1); wherein said plurality of cost benchmarks include: a closing price of the security on a day prior to the day of the execution of the corresponding order; a volume-weighted average price VWAP across all trades for the security during the day of execution of the corresponding order; a closing price of the security on the first day after the day of execution of the corresponding order; a closing price of the security on the 20th day after the day of execution of the corresponding order; an open price of the security on the day of execution of the corresponding order; and a prevailing midquote of the security prior to the execution time of the corresponding order; and wherein each of said plurality of benchmarks are calculated for each security for each order (claim 6); wherein said estimating steps takes into consideration a number of cost factors (claims 7 and 8); graphically displaying said estimated transaction costs for a selected benchmark for a selected institutional investor for one or more selected common categories relative to one or more measures of central tendency or extrema of the estimated transaction cost of the plurality of institutional investors for said selected benchmark for said selected one or more common categories (claim 52).

Keim teaches these limitations on page 3 (exhibit 1, "***costs vary with investment style, trader skill, trade size, and market capitalization***"), page 8 (exhibit 2), pages 9-11 (see also Table 1 (***Trade size***) versus Table 2 (***Market cap; Pa (average prices); Pd (closing price for the stock on the day before the decision to trade the stock***)) and Figures 1-3. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Noser to include these features in order to provide "best execution" for investors. Examiner notes that Keim does not explicitly teach all the cost benchmarks listed in claim 6, however, it would have been obvious to one of ordinary skills in the art to include these other cost benchmarks to the ones cited in Keim for the obvious reason of enhancing the functionality of the system.

Re claim 12: Noser and Keim do not explicitly teach that the benchmarks are calculated in real-time as transactions are executed. Official notice is hereby taken that calculating variables/parameter in real-time is old and well known. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Noser in view of Keim to include these features for the obvious reason of generating faster calculated cost benchmarks.

Claims 2-5, 9-11 and 41-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noser in view of Keim as applied to claim 1 above, and further in view of Efron (Regression percentile using asymmetric squared error loss, 1991) (Efron)

Re claims 2-5, 9-11 and 41-46: Noser does not explicitly teach the use regression analysis using percentiles. Efron teaches regression percentiles (see entire document, Table 2). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Noser in view of Keim to use regression analysis on the variables (transaction costs). One would have been motivated to do this because regression analysis in well known in the statistical art for evaluating the relationship between one variable (termed the dependent variable) and one or more other variables (termed the independent variables). Examiner notes that Keim also teaches regression analysis.

Re claim 47: See claim 12 analysis, supra.

Re claim 48: See claim 13 analysis, supra.

Claims 14, 19-21, 25-27, 32-34, 38-39, 49-51 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noser in view of Keim as applied to claim 1 above, and furher in view of Bettis et al (USPN 7016872) (Bettis).

Re claims 14, 19-21, 25-27, 32-34, 38-39, 49-51 and 53: Noser does not explicitly teach ranking a first investment institution of said plurality of institutional investors against said plurality of investment institutions based on said estimated transaction costs for said plurality of institutions for at least one of said common categories. Bettis teaches ranking a first investment institution of

said plurality of institutional investors against said plurality of investment institutions for at least one of a number of factors (Abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Noser in view of Keim to include the concept of ranking as taught by Bettis for ranking investors based on various factors including transaction costs, size or momentum. One would have motivated to do so in order to evaluate the performance of the investors/traders using these parameters.

Claims 15-18, 22-24, 28-31, 35-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noser in view of Keim, in view of Bettis as applied to claim 14 above, and further in view of Efron.

Re claims 15-18, 22-24, 28-31 and 35-37: See claims 2-5 analyses, supra.

Response to Arguments

Applicant's arguments filed 1/10/2008 have been fully considered but they are not persuasive.

For the various arguments by the applicant, please refer to additional comments in the rejections above and the various attachments (exhibits, figures and tables).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olabode Akintola whose telephone number is 571-272-3629. The examiner can normally be reached on M-F 8:30AM -5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexander Kalinowski can be reached on 571-272-6771. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

OA

/Hani M. Kazimi/
Primary Examiner, Art Unit 3691